

REMARKS

In accordance with the foregoing, claims 1, 12, 14, and 16-26 have been amended, and claims 6 and 7 have been cancelled without prejudice or disclaimer. Claims 1-3 and 8-26 are pending and under consideration. No new matter is presented in this Amendment.

REJECTIONS UNDER 35 U.S.C. §112:

On page 2 of the Office Action, the Examiner rejects claims 1-3 and 8-25 under 35 U.S.C. §112, second paragraph, as being indefinite. The rejection is respectfully traversed, and reconsideration is requested.

While it is respectfully submitted that the claims as previously presented were compliant with 35 U.S.C. §112, second paragraph, claims 1 and 14-25 have been amended to replace the term "pulse" with "period" to be more consistent with the terminology used in the specification as noted by the Examiner on page 2. As such, it is respectfully requested that the Examiner reconsider and withdraw the rejection in light of the claims presented above.

REJECTIONS UNDER 35 U.S.C. §102:

On pages 3-5 of the Office Action, the Examiner rejects claims 1, 8-10, 15, 17, 19, 20 and 22 under 35 U.S.C. §102(e) as being anticipated by Dekker (U.S. Publication No. 2002/0003762). The rejection is respectfully traversed, and reconsideration is requested.

By way of review, FIGs. 1A and 1B of Dekker show an erase pulse sequence 14 having a first erase pulse at a high level P_e and a last erase pulse at a bias level P_1 or P_2 according to the writing speed. The write pulse sequence 13 has pulse at a level P_w , and a bias pulse at a level (unlabeled) below the bias levels P_1 or P_2 of the erase pulse (Paragraphs 0028 through 0031; Figs. 1A through 2). While Dekker shows the first erase pulse at the high level P_e , Dekker does not suggest that a power level of the first erase is the bias levels P_1 or P_2 .

On page 4 of the Office Action, the Examiner asserts that the first pulse of the erase pulse sequence 14 is actually at a low level below P_e or P_1 . However, it is respectfully submitted that the pulse referred to by the Examiner is the bias pulse of the write pulse sequence 13 and would not be understood by one of ordinary skill to be one of the multi-pulses of the erase pulse sequence 14. This low bias pulse is below the level of the low power for the erase pulse sequence 14 (i.e., bias pulse P_1 or P_2), and is not suggested as being part of the erase pulse sequence 14. Thus, the pulse referred to by the Examiner does not correspond to

the low power for the erase pulse sequence 14 and instead is the low power of the write pulse sequence 13.

Additionally, while the Examiner asserts that the power level P1 corresponds to a high level of the erase pulse sequence 14 as compared to the bias level of the write pulse sequence 13, it is respectfully submitted that the power level P1 within the erase pulse sequence 14 is the low level as compared to the erase pulse Pe.

In contrast, claim 1 recites, among other features, "causing a power of a period between an end point of the erase pattern and a start point of the recording pattern to be the high power of the multi-pulse and a power of a leading pulse of the erase pattern to be the low power or the high power of the multi-pulse." As such, it is respectfully requested that the Examiner reconsider and withdraw the rejection in view of Dekker.

Similarly, to the extent that the bias level of the write pulse sequence 13 extends between periods 11 and 12, one skilled in the art would not understand this bias level to be part of the erase pulse sequence 14. Instead, the erase pulse sequence starts at the high level Pe and ends at the low level P1, P2, which is opposite to the pattern recited in claim 19. As such, it is respectfully submitted that the bias level of the write pulse sequence 13 in Dekker does not disclose or suggest, among other features, that "the power of the leading pulse of the erase pattern is other than the power of the of the period" and the "causing a period between an end point of the erase pattern after the multi-pulse and a start point of the recording pattern to be the high power of the multi-pulse" as recited in claim 19.

For at least similar reasons, it is respectfully submitted that Dekker does not disclose or suggest the invention recited in claim 22.

Claims 8-10, 15, 17, and 20 are deemed patentable due at least to their depending from claim 1.

REJECTIONS UNDER 35 U.S.C. §103:

On page 6 of the Office Action, the Examiner rejects claims 2, 11 and 12 under 35 U.S.C. §103(a) in view of Dekker in view of McLaughlin (U.S. Patent No. 6,150,964). The rejection is traversed and reconsideration is respectfully requested.

Even assuming *arguendo* that the Examiner's characterization of McLaughlin is correct, the Examiner does not rely upon McLaughlin as curing the above-noted deficiency of Dekker as

applied to claim 1, from which claims 2 and 11 depend. As such, it is respectfully submitted that the combination does not suggest the features of claim 2 and 11.

Additionally, on page 6 of the Office Action, the Examiner asserts that the bias level of the write pulse sequence 13, which the Examiner also characterizes as the low power level of the erase pulse sequence 14, is also the cooling pulse as recited in claim 12. In contrast, claim 12 recites "the cooling pulse having a cooling power below the low power of the multi-pulse." As such, it is respectfully requested that the Examiner reconsider and withdraw the rejection of claim 12.

On page 7 of the Office Action, the Examiner rejects claim 3 under 35 U.S.C. §103(a) in view of Dekker in view of Clark et al. (U.S. Patent No. 5,802,031). The rejection is traversed and reconsideration is respectfully requested.

Even assuming *arguendo* that the Examiner's characterization of Clark et al. is correct, the Examiner does not rely upon Clark et al. as curing the above-noted deficiency of Dekker as applied to claim 1, from which claim 3 depends. As such, it is respectfully submitted that the combination does not suggest the features of claim 3.

On pages 7-8 of the Office Action, the Examiner rejects claim 7 under 35 U.S.C. §103(a) in view of Ohno et al. (U.S. Patent No. 5,150,351) in view of Nakamura et al. (U.S. Patent No. 6,280,810). The rejection is traversed and reconsideration is respectfully requested.

While applicants do not necessarily agree with the Examiner's construction of claim 7 as previously presented in light of the combination, claim 7 has been cancelled without prejudice or disclaimer. As such, it is respectfully submitted that the rejection is deemed moot.

On page 9 of the Office Action, the Examiner rejects claims 16, 21 and 25 under 35 U.S.C. §103(a) over Dekker in view of Nakamura et al. The rejection is traversed and reconsideration is respectfully requested.

By way of review, Nakamura et al. teaches that the power P_h and P_g are below the erase and write powers P_e , P_w . However, it is noted that Dekker also discloses a bias pulse extending from the write pulse sequence 13 into the erase pulse sequence 14 which is below the erase power P_e , the write power P_w , and the erase bias levels P_2 , P_2 as shown in FIGs. 1A and 1B. As such, it is unclear as to the advantage to using the pulse P_3 having the power P_g and the pulse P_4 having the power P_h as suggested in Nakamura et al. since Dekker already teaches a write bias pulse at this level. Further, there is no suggestion that either the power P_g or the power P_h in Nakamura et al. are below the write bias level of Dekker, which Dekker suggests as

being at the read level P_o in paragraph 0003 and which the Examiner relies upon as a low power of the erase pulse sequence 14.

In contrast, claim 16 recites, among other features, "generating a cooling pulse concatenating the recording and erase patterns, in response to the channel modulated digital data, the cooling pulse having a power below the low power." Therefore, it is respectfully submitted that the combination does not disclose or suggest the features of claim 16.

Similarly, it is respectfully submitted that the combination does not disclose or suggest the features of claim 21 and 25.

On pages 9-10 of the Office Action, the Examiner rejects claim 26 under 35 U.S.C. §103(a) as being unpatentable over Ohno et al. in view of Furumiya (U.S. Patent No. 5,490,126). The rejection is traversed and reconsideration is respectfully requested.

By way of review, Ohno et al. suggests a pulse spacing period having narrow signals which alternate between a playback power level P_r and an erase power level P_b according to 1 and 0 states of a signal as shown in FIG. 4(a). (Col. 6, lines 4-51; Figs. 4A through 5(d)). The beginning pulse and the ending pulse within the 0 state are at a P_r level. There is further no suggestion that another power level exists between the 0 and 1 states of the signal in FIG. 4(a), that the power level of such a pulse should be or is below the P_r level, or that the power levels for the beginning pulse and the ending pulse should be at the P_p level instead of the P_r level shown in FIG. 4(b).

Similarly, to the extent Furumiya teaches edge shifting, Furumiya in FIG. 1(b) teaches that a constant erase power should be maintained prior to the first write pulse. Furumiya is not relied upon as teaching the use of a power level below the P_r level. As such, it is respectfully submitted that the combination does not disclose or suggest, among other features, "causing a power of a leading pulse of the erase pattern to be the low power of the multi-pulse and a power between an end of the erase pattern and a start point of a leading pulse of the recording pattern to be the low power of the multi-pulse, and generating a cooling pulse concatenating the recording and erase patterns, the cooling pulse having a cooling power below the low power" as recited in claim 26.

On page 11 of the Office Action, the Examiner rejects claim 6 under 35 U.S.C. §103(a) over Ohno et al., Furumiya, and Nakamura et al. The rejection is traversed and reconsideration is respectfully requested.

While applicants do not necessarily agree with the Examiner's construction of claim 6 as

previously presented in light of the combination, claim 6 has been cancelled without prejudice or disclaimer. As such, it is respectfully submitted that the rejection is deemed moot.

CONCLUSION:

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.


Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 503333.

Respectfully submitted,

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